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(54)【発明の名称】 有用植物エキス抽出方法及び該抽出方法により得られた植物エキス並びに該植物エキスを含有有効成分とする皮膚改善用品

(57)【要約】

【目的】皮膚改善有用植物から有効成分をバイオ反応により抽出する方法及び抽出された該植物エキスを含有有効成分とした皮膚改善用品を提供する。

【構成】皮膚改善効果のある朝鮮人参、どくだみ、アロエ、びわの葉、桃の葉、クコ、芍薬、大蒜の少なくとも一つの植物に澱粉分解酵素、蛋白質分解酵素、麹菌、多糖類分解微生物のうち少なくとも一つを加え反応させて植物エキスを抽出させる。またさらに、該反応の過程中または反応後に、酵母、乳酸菌および脂肪分解酵素のうち少なくとも一つを加え反応させることにより植物エキスを抽出させ、該植物エキスを有効成分として含有させた基礎化粧品、入浴剤、ボディシャンプー、皮膚疾患改善用塗布剤、育毛剤等の皮膚改善用品を得る。

## 【特許請求の範囲】

【請求項1】 皮膚改善効果のある朝鮮人参、どくだみ、アロエ、びわの葉、桃の葉、クコ、芍薬、大蒜の少なくとも一つの植物に澱粉分解酵素、蛋白質分解酵素、麹菌、多糖類分解微生物のうち少なくとも一つを加えて反応させ植物エキスを抽出する方法。

【請求項2】 請求項1の反応過程中または反応後に、さらに酵母、乳酸菌および脂肪分解酵素のうち少なくとも一つを加え反応させ植物エキスを抽出させる方法。

【請求項3】 請求項1または請求項2の抽出方法により得られた植物エキス。

【請求項4】 請求項3の植物エキスを含有有効成分とする基礎化粧品である皮膚改善用品。

【請求項5】 請求項3の植物エキスを含有有効成分とする入浴剤である皮膚改善用品。

【請求項6】 請求項3の植物エキスを含有有効成分とする石鹼またはボディシャンプーである皮膚改善用品。

【請求項7】 請求項3の植物エキスを含有有効成分とする皮膚疾患改善用塗布剤である皮膚改善用品。

【請求項8】 請求項3の植物エキスのうち、どくだみ、びわの葉の少なくとも一つを原料とする植物エキスを含有有効成分とする育毛剤または育毛用ヘアシャンプーである皮膚改善用品。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】 本発明は、皮膚の改善効果のある朝鮮人参、どくだみ、アロエ、びわの葉、桃の葉、クコ、芍薬、大蒜の植物エキス抽出方法及び該抽出方法により得られた植物エキス並びに該植物エキスを含有有効成分とする皮膚改善用品に関するものである。

## 【0002】

【従来の技術】 朝鮮人参、どくだみ、アロエ、びわの葉、桃の葉、クコ、芍薬、大蒜の植物には肌をしっかりと、艶やかにする効果があることが従来から知られており、美容の目的でこれらの植物を煮だした液を肌に塗布したり、浴湯に入れたりして使用することが行なわれて来た。

【0003】 また、この皮膚改善効果に着目して、これらの植物から煮だした液を含有する化粧水や入浴剤等が商品化された事例も一部ある。

## 【0004】

【発明が解決しようとする課題】 従来より行われてきた有効成分を取り出す方法としての煮だしの方法では、有効成分の抽出が水や熱湯に溶出する分にとどまり、また、有効成分が溶出しても澱粉、高分子の多糖類、蛋白質等と結合した形で存在するため、そのままの形では皮膚の改善効果が顕著に現われないという問題があった。

【0005】 本発明は、従来利用できなかった有効成分をもバイオ反応により澱粉、多糖類、蛋白質等より分解して植物エキスを抽出する方法及び該方法により得られ

た植物エキス並びに該植物エキスを含有有効成分とする皮膚改善用品を提供することにある。

## 【0006】

【課題を解決するための手段】 上記の目的を達成するために、請求項1～2に記載された発明は、朝鮮人参、どくだみ、アロエ、びわの葉、桃の葉、クコ、芍薬、大蒜の少なくとも一つの植物に澱粉分解酵素、蛋白質分解酵素、麹菌、多糖類分解微生物のうち少なくとも一つを加え反応させて植物エキスを抽出する方法としている。またさらに、該反応の過程中または反応後に、酵母、乳酸菌および脂肪分解酵素のうち少なくとも一つを加え反応させて植物エキスを抽出させる方法としている。

【0007】 請求項3に記載された発明は、朝鮮人参、どくだみ、アロエ、びわの葉、桃の葉、クコ、芍薬、大蒜のうち少なくとも一つの植物に澱粉分解酵素、蛋白質分解酵素、麹菌、多糖類分解微生物のうち少なくとも一つを加え反応させて抽出された植物エキス。またさらに、該反応の過程中または反応後に、酵母、乳酸菌及び脂肪分解酵素のうち少なくとも一つを加え反応させ抽出されることにより植物エキスとしている。

【0008】 請求項4～7に記載された発明は、請求項3の植物エキスを有効成分として含有させた基礎化粧品、入浴剤、石鹼またはボディシャンプー、皮膚疾患改善用塗布剤である皮膚改善用品としている。

【0009】 請求項8に記載された発明は、請求項3の植物エキスのうち、どくだみ、びわの葉の少なくとも一つを原料とした植物エキスを有効成分として含有させた育毛剤または育毛用ヘアシャンプーである皮膚改善用品としている。

## 【0010】

【作用】 本発明による植物エキスの抽出方法では、前記有用植物に澱粉分解酵素、蛋白質分解酵素、麹菌等を添加し、密閉反応容器内等でバイオ反応を起こせると、高分子構造の成分を低分子の糖類やアミノ酸等に分解し、この過程で澱粉、多糖類、蛋白質等と結合したりこれらの構成要素の一部となっていた有効成分が分離あるいは生成して溶出される。

【0011】 また、酵素や麹菌のほかに、更に、酵母あるいは乳酸菌も加えて発酵させることにより、更に、異なった有効成分を抽出させることができる。

【0012】 よって、本発明による植物エキスを含有する基礎化粧品、入浴剤、ボディシャンプー、皮膚疾患塗布剤の皮膚改善用品は従来の植物の煮だし液を用いたものに比べ、はるかに皮膚改善効果の高いものとなる。

【0013】 更に、植物エキスのうち、どくだみ、びわの葉の少なくとも一つを原料とする植物エキスを含有させることにより、育毛の働きが強くなる。

## 【0014】

【発明の効果】 本発明は、以上説明したような抽出エキスとなっているので、以下に記載されるような効果を奏

する。

【0015】請求項1～3に記載された発明によれば、前記皮膚改善効果のある植物に澱粉分解酵素、蛋白質分解酵素、麹菌等によるバイオ反応により抽出する方法としているので、従来の煮だしでは限度のある澱粉や多糖類に結合している有効成分の分離溶出が可能となり、はるかに多くのかつ有効な植物エキスが得られる。

【0016】また、請求項4～7に記載された発明によれば、抽出した植物エキスを肌に塗布した結果、キメが細かくなり張りや艶がでて皮膚の改良効果が大きいので、植物エキスを含有させることにより皮膚改善効果の大きい基礎化粧品、入浴剤、石鹼及びボディシャンプー等を作ることができる。

【0017】更に、皮膚の湿疹部に塗布すると症状の改善がみられ、皮膚の活力機能を高め湿疹等を治癒させる効果も確認でき、皮膚疾患改善塗布剤を作ることができる。

【0018】またさらに、請求項8に記載された発明によれば、どくだみ、びわの葉より抽出した植物エキスを頭禿部に塗って育毛効果も確認でき、育毛剤や育毛用ヘアシャンプーを作ることができる。

【0019】

【実施例】朝鮮人參及びびわの葉を細かく砕き加熱水蒸気に通した後、三倍重量の水を加えて45℃まで加熱する。これに澱粉分解酵素であるアミラーゼと蛋白質分解酵素であるプロテアーゼと米麹を添加し、密閉容器の中で45℃の温度条件で三日間据え置く。

【0020】その間に、分解して泥状になっている朝鮮\*

\* 人參とびわの葉の混合液を濾過装置を通して濾過し透明な朝鮮人參及びびわの葉混合エキスを得る。

【0021】この朝鮮人參及びびわの葉混合エキスを40代の女性8人及び30代の女性8人をモニタとして朝晩2回顔に塗布し2週間後の素肌の状態を肉眼及びマイクロスコープの50倍観察を行なったところ、40代の女性では8人中6人に、30代の女性では8人中5人に顕著な肌の改善効果が認められた。

【0022】具体的な改善効果としては、肌に張りや艶がでてきた事例が多くまた、皮丘が小さく低くなりキメが細かくなっている様子がマイクロスコープの観察で多く認められた。

【0023】また、この朝鮮人參及びびわの葉混合エキスを湿疹のある女性6人に毎日2回塗布したところ、6人中4人に2～3日目から症状が良くなり3人は6～7日後に完治し、肌の改善に加え皮膚の活力、機能をも高めて湿疹等を治癒させる効果のあることも確認できた。

【0024】なお、従来から行なわれている朝鮮人參及びびわの葉の煮だし液について比較モニタ試験を行なつたが、2週間後では肌の改善は殆ど認められず、5週間後経過した時点で8人中3人に微弱な改善効果が認められるに過ぎなかった。

【0025】なお、本実施例では、朝鮮人參及びびわの葉への加水量を300%とし、加熱温度を45℃として反応させたが、通常、加水量は50～400%の範囲が適当であり、また、バイオ反応の温度条件は用いる酵素や微生物の種類に応じて10～80℃の範囲の中から選定するのが適切である。

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**(54) EXTRACTION OF USEFUL PLANT ESSENCE, PLANT ESSENCE OBTAINED BY THE EXTRACTION AND SKIN-IMPROVING PRODUCT CONTAINING THE SAME ESSENCE AS THE ACTIVE COMPONENT**

**(57)Abstract:**

**PURPOSE:** To provide a method for extracting the active components of a useful plant for improvement of the skin by a bioreaction and a product for improvement of the skin containing the resultant extracted plant essence.

**CONSTITUTION:** Extraction of a plant essence is carried out by adding one or more substances selected from an amylase, a protease, an *Aspergillus oryzae* and a polysaccharide decomposition microorganism and allowing them to act on one or more kinds of plants selected from ginseng, *Houttuynia cordata*, aloe, leaves of Japanese medlar, leaves of peach, Chinese matrimony vine, peony and garlic respectively having an effect for improvement of the skin. The product for improvement of the skin, e.g. a skin-care cosmetic, a bathing agent, a body shampoo, a liniment for improvement of dermal diseases or a hair tonic respectively containing the plant essence as the active component can be obtained by adding one or more substances selected from an yeast, a *lactobacillus* and a lipase after or during the course of the above-mentioned reaction, allowing them to act thereon and extracting the plant essence.

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## CLAIMS

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### [Claim(s)]

[Claim 1] How to make at least one of a dregs part dialytic ferment, a proteolytic enzyme, an aspergillus, and polysaccharide decomposition microorganisms add and react to a ginseng radix with a skin improvement effect, \*\*\*\* which moves aside, an aloe, a leaf of Eriobotrya japonica, a leaf of a peach, a Chinese matrimony vine, paeoniae radix, and at least one vegetation of allii bulbus, and to extract a vegetable essence.

[Claim 2] How to add at least one of yeast, lactic acid bacteria, and stearolytic enzyme, to make it react further after a reaction in a reaction process of claim 1, and to make a vegetable essence extract.

[Claim 3] A vegetable essence obtained by an extraction method of claim 1 or claim 2.

[Claim 4] A skin improvement article which is basic cosmetics which make a vegetable essence of claim 3 a content active principle.

[Claim 5] A skin improvement article which is bath salts which make a vegetable essence of claim 3 a content active principle.

[Claim 6] A skin improvement article which is soap or a body shampoo which makes a vegetable essence of claim 3 a content active principle.

[Claim 7] A skin improvement article which is the paint for a skin disease improvement which makes a vegetable essence of claim 3 a content active principle.

[Claim 8] A skin improvement article which is a hair restorer or a hair shampoo for hair fostering which makes \*\*\*\* which moves aside among vegetable essences of claim 3, and a vegetable essence which uses at least one of the leaves of Eriobotrya japonica as a raw material a content active principle.

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[Translation done.]

## DETAILED DESCRIPTION

## [Detailed Description of the Invention]

## [0001]

[Industrial Application] This invention relates to the skin improvement article which makes the vegetable essence obtained by the vegetable essence extraction method and this extraction method of a ginseng radix with the improvement effect of the skin, \*\*\*\* which moves aside, an aloe, the leaf of Eriobotrya japonica, the leaf of a peach, a Chinese matrimony vine, paeoniae radix, and allii bulbus, and this vegetable essence a content active principle.

## [0002]

[Description of the Prior Art] It is known from the former that there is an effect which makes skin fascinating gently in the vegetation of a ginseng radix, \*\*\*\* which moves aside, an aloe, the leaf of Eriobotrya japonica, the leaf of a peach, a Chinese matrimony vine, paeoniae radix, and allii bulbus, and using it for a bath, applying to skin the liquid which began to boil these vegetation for the purpose of cosmetics, or putting it in has been performed.

[0003] Paying attention to this skin improvement effect, there is also a part of example where the face toilet containing the liquid which it began to boil from these vegetation, bath salts, etc. were commercialized.

## [0004]

[Problem(s) to be Solved by the Invention] Boil the active principle performed conventionally as a method of taking out, and in the method of a broth. Since it existed in the form combined with a part for dregs, polysaccharide of polymers, protein, etc. even if extraction of an active principle remains in the part eluted in water or boiling water and an active principle is eluted, in a form as it is, there was a problem that the improvement effect of the skin did not show up notably.

[0005] There is this invention in providing the skin improvement article which makes the vegetable essence obtained by the method of a bio-reaction also decomposing the active principle which was not able to be used conventionally from a part for dregs, polysaccharide, protein, etc., and extracting a vegetable essence, and this method, and this vegetable essence a content active principle.

## [0006]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, an invention indicated to claims 1-2, It is considered as a method of making at least one of a dregs part dialytic ferment, a proteolytic enzyme, an aspergillus, and polysaccharide decomposition microorganisms adding and reacting to a ginseng radix, \*\*\*\* which moves aside, an aloe, a leaf of Eriobotrya japonica, a leaf of a peach, a Chinese matrimony vine, paeoniae radix, and at least one vegetation of allii bulbus, and extracting a vegetable essence. It is considered as a method of adding at least one of yeast, lactic acid bacteria, and stearolytic enzyme, making it reacting after a reaction in a process of this reaction, and making a vegetable essence extracting.

[0007] A vegetable essence which an invention indicated to claim 3 made at least one of amylolytic enzyme, a proteolytic enzyme, an aspergillus, and polysaccharide decomposition microorganisms add and react to at least one vegetation among a ginseng radix, \*\*\*\* which moves aside, an aloe, a leaf of Eriobotrya japonica, a leaf of a peach, a Chinese matrimony vine, paeoniae radix, and allii bulbus, and was extracted. It is considered as a vegetable essence by adding at least one of yeast, lactic acid bacteria, and stearolytic enzyme, making it react after a reaction in a process of this reaction, and making it extract.

[0008] An invention indicated to claims 4-7 is using a vegetable essence of claim 3 as a skin improvement article which are basic cosmetics, bath salts and soap which were made to contain as an active principle or a body shampoo, and the paint for a skin disease improvement.

[0009] An invention indicated to claim 8 is using \*\*\*\* which moves aside among vegetable essences of claim 3, and a vegetable essence which used at least one of the leaves of Eriobotrya japonica as a raw material as a skin improvement article which is a hair restorer or a hair shampoo for hair fostering made to contain as an active principle.

## [0010]

[Function] If a dregs part dialytic ferment, a proteolytic enzyme, an aspergillus, etc. are added to said useful plant and a bio-reaction is made to cause within a sealing reaction vessel etc. in the extraction method of the vegetable essence by this invention, The ingredient of polymer structure is decomposed into low-molecular sugars, amino acid, etc., and it is dissociated, or generated and eluted in this process in the active principle which combined with a part for dregs, polysaccharide, protein, etc., or had become a part of these components.

[0011]A different active principle can be made to extract further by also adding yeast or lactic acid bacteria besides an enzyme or an aspergillus, and fermenting them.

[0012]Therefore, the conventional vegetation boils the skin improvement article containing the vegetable essence by this invention of basic cosmetics, bath salts, a body shampoo, and the skin disease paint, and it becomes a high thing of a skin improvement effect far compared with the thing using broth liquid.

[0013]Work of hair fostering becomes strong by making \*\*\*\* which moves aside among vegetable essences, and the vegetable essence which uses at least one of the leaves of Eriobotrya japonica as a raw material contain.

[0014]

[Effect of the Invention]In this invention, it is the extraction extract which was explained above. Therefore, an effect which is indicated below is done so.

[0015]Since it is considered as the method of extracting by the bio-reaction by amylolytic enzyme, a proteolytic enzyme, an aspergillus, etc. for vegetation with said skin improvement effect according to the invention indicated to claims 1-3, Separation elution of the active principle combined with the conventional starch which boils and is limited in a broth and polysaccharide is attained, it is many far and an effective vegetable essence is obtained.

[0016]By a texture's becoming fine and tension and gloss coming out, as a result of applying the extracted vegetable essence to skin according to the invention indicated to claims 4-7, since the improvement effect of the skin is large, Large basic cosmetics, bath salts, soap, a body shampoo, etc. of a skin improvement effect can be made by making a vegetable essence contain.

[0017]If it applies to the eczema part of the skin, an improvement of condition can be found, the effect of improving the vital force function of the skin and making eczema etc. recovering can also be checked, and the skin disease improvement paint can be made.

[0018]According to the invention indicated to claim 8, \*\*\*\* which moves aside, and the vegetable essence extracted from the leaf of Eriobotrya japonica can be applied to a \*\*\*\* part, a hair restoration effect can also be checked, and a hair restorer and the hair shampoo for hair fostering can be made.

[0019]

[Example]After breaking the leaf of a ginseng radix and Eriobotrya japonica finely and letting it pass to heated steam, the water of weight is added 3 times and it heats to 45 \*\*. Protease and the rice malt which are amylase and the proteolytic enzyme which are amylolytic enzyme are added to this, and it keeps unchanged at it for three days by 45 \*\* temperature conditions in a well-closed container.

[0020]The mixed liquor of the leaf of the ginseng radix and Eriobotrya japonica which decompose and have become mud-like between them is filtered through a filtration apparatus, and the leaf mixing extract of a transparent ginseng radix and Eriobotrya japonica is obtained.

[0021]The place which considered eight women in her 40's, and eight women in her 30's for the leaf mixing extract of this ginseng radix and Eriobotrya japonica as the monitor, applied to the face twice the morning and evening, and performed a naked eye and 50 time observation of a microscope for the state of the bare skin of two weeks after, By the woman in her 40's, six persons were permitted the improvement effect of a skin remarkable in five persons among eight persons by the woman in her 30's among eight persons.

[0022]the example out of which tension and gloss came to skin as a concrete improvement effect -- many -- again -- leather -- many signs that a hill became low small and the texture was fine were accepted by observation of a microscope.

[0023]When the leaf mixing extract of this ginseng radix and Eriobotrya japonica was applied twice to six women with eczema every day, it has checked that it was also effective in the 2 to 3rd day to condition becoming good among six persons at four persons, recovering three persons completely in six to seven days, also improving the vital force of the skin, and a function in addition to an improvement of skin, and making eczema etc. recover.

[0024]Although the leaf of the ginseng radix and Eriobotrya japonica which are performed from the former boiled and the comparison monitor examination was done about broth liquid, in two weeks, most improvements of skin were not accepted, but when it passed five weeks afterward, three persons were only permitted the weak improvement effect among eight persons.

[0025]Although the amount of adding water to the leaf of a ginseng radix and Eriobotrya japonica was made into 300% and cooking temperature was made to react as 45 \*\* in this example, Usually, 50 to 400% of range is suitable for the amount of adding water, and it is appropriate for the temperature conditions of a bio-reaction to select from the ranges of 10-80 \*\* according to the kind of the enzyme to be used or microorganism.